

AMENDMENTS TO THE SPECIFICATION

Please revise page 3, first paragraph, to read:

According to the invention this object has been achieved by the invention described below
~~characterizing features of claim 1.~~

Please revise the first paragraph of page 4 to read:

The transmission mechanism 20 contains three movable parts, namely two links ~~sides~~ 21 and a coupler 23. At each of the outer ends of the two impellers 12 of the driving lever 11 there is connected one of the links ~~sides~~ 21 in a one-sided manner by means of a link~~side~~ joint 22. The other two ends of the links ~~sides~~ 21 are connected to the coupler 23 by means of coupling joints 24.

Please revise the third paragraph of page 4 to read:

A pinion and a steering rack are indicated at the driving shaft ~~10~~ 30 which merely serve as an illustration of a possible mechanism of a steering and shall be in no way construed as limiting.

Please revise the last paragraph of page 4 to read:

In an example of a preferred embodiment the links ~~sides~~ 21 are of the same length, the axes A and B of the two link ~~side~~ joints 22 have a different distance from the axis X of the driving shaft 10, and the axis Z' of the output joint 32 on the coupler 23 (Figs. 1a and 1b) is centrally located between the axes C and D of the coupling joints 24. The movable parts 21, 23 of the transmission mechanism 20 are able to perform a periodic UNIVARIANT movement if the

position of the steering wheel 40 is fixed. During this movement, the axis Z' of the output joint 32 on the coupler 23 passes through a closed path which in the projection onto the plane of the driving lever 11 can be represented by the form of a long-stretched eight. An example of this path is represented in Figure 2 as a dotted long-stretched "8". In this respect it should be noted that a wide central area of this curve forms a straight line g . In the arrangement according to the invention, the axis Z' of the output joint 32 on the coupler 23, of the whole possible path described, in each case will only pass through an area within one of the straight line segments referred to as g .

Please revise page 5, second paragraph, to read:

According to the invention care should be taken that the positions of the axes A and B of the two link side joints 22 on the driving lever 11 are chosen in a way that the straight line segment g passes through the axis X of the driving shaft 10.

Please revise page 5, third paragraph, to read:

The central point M of the described path having the form of an eight is centrally located between the two axes A and B of the two linkside joints 22. The distance from the central point M of the path to the axis X of the driving shaft 10 is referred to as R_2 . The position of the central point M of the path relative to the axis X of the driving shaft 10 can be interpreted as a momentary position of a steering wheel 40. Therefore, during a turn of the steering wheel 40 - 180° from to $+180^\circ$ the central point M of the path describes a circular path m around the axis X of the driving shaft 10 having a radius of R_2 .

Please revise the last paragraph of page 5 to read:

In Figure 3 the linkssides 21 and the coupler 23 are symbolically represented as lines in the positions 0° , 45° , 90° , 135° , and 180° . The position 0° corresponds to the position of the gear 1

which has the highest transmission ratio and corresponds to the position of straight-ahead driving in the example of a steering gear.

Please revise the second paragraph of page 6 to read:

The individual momentary positions of the axes Z_i of the output joint 32 are also depicted in Figure 4. The driving shaft 10 can be turned by 180° into each direction. In this movement, the movement of the driving shaft 10 transmitted by the transmission mechanism 20 according to the invention also results in a rotation of the driven shaft 30 by 180° in each direction wherein the angle increments Alpha i of the driving rotation are non-linear with respect to the angle increments Alpha i' of the driven rotation. This becomes clear from Fig. 4.

Please revise the page 6, third paragraph, to read:

Since the distances of the two axes A and B of the side joints 22 to the axes C, D of the coupling joints 24 in Figure 3 are of the same length and the output joint is arranged in the centre of the coupler 23, the two links_sides 21 during straight-ahead driving have essentially the same angle with respect to straight line n which generally is between 45° and 90° , preferably between 70° and 80° , and in this example is about 75° . Accordingly, the two axes A and B of the link_side joints 22 have the same distances to the straight line n as those of axes X of the driving shaft 10 and Y of the driven shaft 30.

Please revise the last sentence of the first paragraph on page 7 to read:

The movement in this area around the central point M of the path is advantageous for the force transmission from the driving shaft 10 to the movable parts 21, 23 because the individual movable part do not show any steep angles with respect to each. In each case, the most direct force transmission will be achieved if the device for guiding the force is located in the direction of movement of the part to be moved. This means that in the arrangement according to the invention the movable parts should be as perpendicular to each other as possible.

Therefore, the length and distance relationships of the transmission mechanism 20 should be advantageously selected in a way that the angles between the links sides 21 and the coupler 23 during a full rotation of the steering mechanism do not become sharper than 45° and not more obtuse than 135° .

Please revise the second paragraph of page 7 to read:

It has been found reasonable to select the distance of the axes A and B of the side joints 22 from the straight line n in the order of double the radius R_Y of the circular path k of the axis Z of the output lever 31 around axis Y of the driven shaft 30 ($2 R_Y$). The larger this distance is, the more direct are the force transmissions because the angles do not differ much from 90° . On the other hand, the greater the distance of axis A or B of the link side joints 22 which is spaced farther away from the axis X of the driving shaft is, the more space will gear 1 require since the whole circular area around axis X of the driving shaft 10 which has the radius of the longer impeller 12 of the driving lever 11 will be needed upon one rotation of the driving shaft 10.

Please revise the fourth paragraph 4 on page 7 to read:

It is not absolutely required to select the links sides 21 with the same length, and it is also not absolutely required to place the output joint 32 in the centre of coupler 23. An asymmetry of this kind, however, is not desired for a steering mechanism since this may lead to the occurrence of an asymmetric steering behaviour upon turning the steering wheel 40 to the left or to the right, respectively. For other applications, where this symmetry is not required, however, a gear 1 of this type can be contemplated.

Please revise the last paragraph on page 7 to read:

For the application of a steering mechanism of a vehicle, size ratios have been found

favourable wherein the total diameter of the space requirement is between 15 cm and 35 cm. For this purpose, the distance of the axes A and C or B and D, respectively, of joints 22, 24 on the links ~~sides~~ 21 is ~~preferably~~ selected between 60 and 100 mm in length, preferably between 80 and 90 mm. It has been found advantageous to select coupler 23 shorter than the sides 21. A distance of the axes C and D of the coupling joints 24 on the coupler 23 of between 40 and 80 mm, preferably between 60 and 70 mm has been found suitable. Furthermore, a distance R_Y of the axes Y of the driven shaft 30 and Z of the output joint 32 on the output lever 31 of between 30 and 70 mm, preferably of between 40 and 50 mm is sought.

Please revise page 10, lines 7 and 8 to read:

21 link ~~side~~

22 link ~~side~~ joints